

Fall Oak

On a fine, fall day we found ourselves sitting at the base of an oak tree. Not just any oak tree, but the one that shelters my partner's mother. He had been missing her in the worst way, and it seemed like the way to ease the ache was to visit her resting place. Not far from where she grew up, this sweet spot is nestled in amongst fields and the surrounding woods, just a short drive south of the Chippewa National Forest.

The days are growing shorter, but the sun still has that golden color it takes on in fall, and the ground has not yet given up its warmth for the year. It felt good to share the heat, as the air is getting cooler. A little time spent in this fashion is all it takes to feel the peace there, and let it wash over you.

Woven into the quiet of the place, there was a flurry of activity around that oak tree. You could watch what looked to be a pretty steady stream of blue jays making their way across the fields to the tree, drawn to the remarkable crop of acorns it had produced. Back and forth they went, clearly on a mission to take as many of those acorns away to their winter caches as possible.

Blue jays are known for their caching behavior. An adult blue jay probably harvests and eats or caches several thousand acorns each autumn. They prefer to take their acorns from the trees, as opposed to those on the ground. They select smaller acorns over larger acorns, and carry maybe 5 at a time, by storing 2 or 3 in their distended crop, and one more each in the mouth and tip of the bill. They will fly as far as 2 miles to gather acorns, and return to their breeding sites to store them in what is known as a cache. Once they arrive at the cache site, all of the acorns are placed in a pile, and then individually buried several feet apart in holes they dig with their beaks. After raking soil over the top of each acorn, the jay will place a dead leaf or pebble over each site.

Perhaps 30% of acorns cached in this manner are later consumed by the jays, and the seed is an important source of high-energy carbohydrates for the birds. About two thirds of a jay's diet from October to March consists of acorns and other mast. The acorns that are not eaten by jays or other seed predators may sprout into oak seedlings. Blue jays are known to be an important means of dispersing and planting oaks. It is believed that the rapid dispersal of oaks after the ice age resulted from northern transport of acorns by birds.

Not the only creatures to recognize the packets of life that acorns provide, there was something else working up over us in the tree, because it was as if the acorns were raining down upon us. Every now and then, one would hit my old van with a 'ping', and I wondered that our dogs inside remained quiet.

When we got to watching the scene more carefully, it turned out that the local chipmunks were



also at work. You could see them running up and down the tree trunk. The cheek pouches of one chippy were so stuffed, we just had to laugh. Clearly, he does not intend to suffer much hunger this winter. Chipmunks hibernate in winter, but do not put on as much body fat as do ground squirrels

and woodchucks. They awaken frequently and feed on foods like acorns that they have stored in their burrows.

Oak acorn production varies greatly by year. Years of particularly heavy acorn production are followed by 2 to 4 years with little or no production. The cycles of acorn production vary by the species of oak involved. In years with little or no acorn production, populations of seed predators may decline.

Black bears on the Chippewa National Forest sometimes make a late summer migration in pursuit of the high calorie density landscape that oaks can create. Bears hibernate for as long as 6 or 7 months, living off of their body fat. These animals leave their home ranges in August, moving south to where acorns are more plentiful, where they will fatten themselves for hibernation. Males will travel 16 miles or more; females tend to travel less. They favor bur and white oak, probably because the acorns have lower tannin content than do red oak. They return to their home range about 6 weeks later.

It's kind of funny, but these bears are not migrating every year. Rather, they are mainly moving in years of good acorn production. It's thought that because migration burns energy and puts the animals at higher risk, it doesn't pay for the bears to move about in years with poor acorn availability.

The climate change predictions for northern Minnesota suggest conditions will become increasingly less favorable for our boreal forest species such as balsam fir and spruce. In their lifetimes, our children may well see components of the boreal system fading away. Our future climate is more likely to support southerly species like the oaks, although the pace of change may well be such that it's going to take more than blue jays to get them here.

An afternoon spent under that fall oak tree is a good reminder of the way of things. Life has a way of circling around. Where is your Mom, baby? She's in the oak that feeds the birds, the leaves that rustle, the glow of the day. Look for her as you take the dogs to the duck ponds and stock our freezer for the winter to come.

by Kelly Barrett, Wildlife Biologist
Chippewa National Forest